TEXTILE BULLETIN

Vol. 53 September 9, 1937 No. 2

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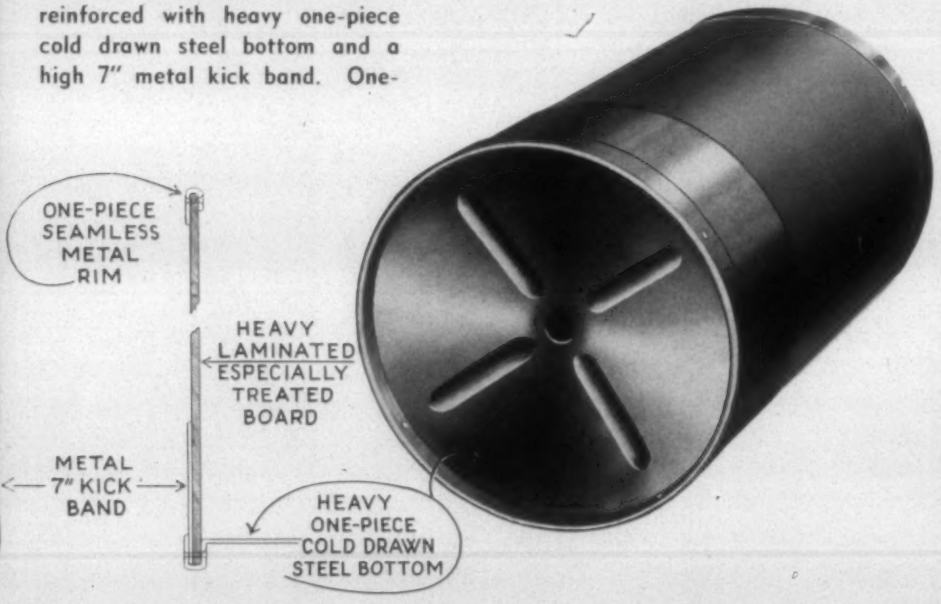
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SPUN RAYON

By Thomas Nelson and T. R. Hart, Textile School, N. C. State College

DURING the past three years the production of staple fiber or staple rayon, as it is sometimes called, has increased tremendously, especially in Italy, Germany and some other countries where economic conditions are vastly different from those which prevail in America. Over there they are forced to find substitutes for cotton and wool or import these commodities from other countries where an excess is produced. Over here we are constantly seeking new uses for cotton in order to take care of our excess cotton production.

Thus economic necessity forced other nations to take the lead in staple fiber production. Last year Italy and Germany produced about 57 per cent of the world production of 280 million pounds, while Japan produced approximately 27 per cent of the total.

In America, the production of staple fiber started about 1925. In the beginning waste rayon yarns of continuous filament were cut into short lengths so that they could be spun. This waste frequently contained oil or dirt and often was badly mixed, consequently fabrics made from this material acquired a poor reputation. However, rayon producers have profited by research and experience so that in 1936 they are producing staple fiber that is far superior to that placed on the market a decade ago and it is rapidly gaining a firm position in the textile industry.

Today only new material is used in its production and the fibers are cut into definite lengths while the rayon is soft and newly made. "The short fibers immediately after cutting are free to develop curls and twists which are invaluable in spinning either with themselves or in blends with cotton and wool. This factor has the effect of increasing greatly the surface attraction and cohesion among the fibers with consequent improvement of the knitting (and weaving) properties of the yarns."

The usual length of staple fibers intended for mixtures with cotton or for the production of all-staple fiber yarns on cotton machinery is about 1½ inches, although other lengths can be obtained. Longer staple fibers are used for blends with wool or hair. The size of the staple fiber produced in this country is usually 1½, 3 or 4½ denier per filament. The larger filaments are generally used for blending with wool while the 1½ denier filaments are considered more suitable for mixing with cotton or for processing on the cotton system. Staple fiber is sold in paper wrapped bales weighing 500 pounds and when baled the moisture content is approximately 10 per cent.

The viscose process is most largely used in producing American staple fiber but staple fiber produced by the acetate or cuprammonium processes can be obtained. The physical and chemical properties of the viscose product are said to make it more suitable for use in the cotton industry while it is claimed that wool is the logical field for the acetate product.

The following quotation from a recent article by Dr. E. K. W. Schwarz should prove of general interest:

"One remarkable property of acetate is that it stands carbonizing with hydrochloric acid (but not with sulphuric acid). Another physical property of acetate staple rayon is of great importance when used in mixture with wool. This

(*Continued on Page 34*)

Government Loan and Adjustment Payment Program

(Extracts from the trade report of the New York Cotton Exchange Service, prepared by Mr. Alston H. Garside, Economist)

IN establishing three loan rates for cotton of the 1937 crop, applying to three categories of quality, the Commodity Credit Corporation has observed the same principle as it embodied in the terms of the 10-cent loan of 1933, the 12-cent loan of 1934, and the 10-cent loan of 1935, but it has carried that principle somewhat farther. In all of those loan programs it had two loan rates, the basic one for cotton of seven-eighths inch or better staple in low middling or higher grade, and the other, one cent less, for cotton of less than seven-eighths inch staple in low middling or higher grade. Thus, under the 10-cent loan program of 1933, there was a 9-cent rate for cotton of less than seven-eighths inch staple in low middling or higher grade, and, similarly, an 11-cent rate under the 12-cent loan of 1934, and a 9-cent rate under the 10-cent loan of 1935, for such short cotton. The loan arrangement for the 1937 crop, just announced, provides for loan rates of nine cents, seven and three-quarters cents, and eight cents. The categories of quality to which these rates apply are as follows:

The nine-cent loan rate applies to all tenderable cotton which is of seven-eighths inch or longer staple, of middling or higher grade, in any color. The minimum grade eligible for the nine-cent loan rate is middling. Cotton of a grade below middling does not command the nine-cent rate even if the staple of it is in excess of seven-eighths inch. The seven and three-quarters cent rate applies to all tenderable cotton of seven-eighths inch or longer staple, of a grade below middling, in any color. The provision that this rate applies only to tenderable cotton rules out grades below low middling in extra white and white, below middling in spotted, below strict middling in tinged and gray, and below good middling in yellow staianed. The eight-cent loan rate applies to thirteen-sixteenths inch cotton in middling or higher grade. Cotton of thirteen-sixteenths inch staple in grade below middling is not eligible as loan collateral.

Only growers who agree to co-operate with the Government in the 1938 cotton control program will be eligible for loans. Loans will be made on cotton in approved warehouses at points of origin. They will carry an interest rate of four per cent and mature July 31, 1938.

To arrive at a rough indication of how much of the current crop is eligible for each loan rate, and how much is ineligible, we have computed the number of bales of the 1936 crop, and the percentage of that crop, which was in each of the categories of quality specified in the new loan program, and we have applied those percentages to the approximate total of running bales in the current crop, based on the Government crop forecast in 500-pound gross weight bales as of August 1st. The running bale figure which we have used for the current crop is 15,250,000, that being the approximate equivalent of the Government forecast of 15,593,000 bales of 500 pounds gross weight, assuming an average bale weight of 512 pounds. It should be noted that our calculation is valid only if two assumptions are accepted, namely, first, that the current crop will total 15,250,000 running bales, and, secondly, that the current crop will consist of the various grades and staples in the same proportions as the 1936 crop. Subject to these qualifications, the results of our calculation are given below:

Terms	% of Crop	Running Bales
Eligible for 9-cent loan	66.8	10,187,000
Eligible for 7¾-cent loan	20.1	3,065,000
Eligible for 8-cent loan	5.5	839,000
Total eligible for loan	92.4	14,091,000
Ineligible for loan	7.6	1,159,000
Total crop	100.0	15,250,000

Note: Calculations are based on a hypothetical crop of 15,250,000 bales, which, of course, is not a forecast or estimate of the total yield.

In considering spot values for cotton, needless to say, one must allow for the fact that location is an important factor. To illustrate: At the close of the market Monday, when the October future at New York was quoted at 9.32 cents, and the Southern ten-market average price for middling seven-eighths inch spots was 9.31 cents, the range from the highest to the lowest spot market was from 8.77 at Dallas to 9.67 at Augusta. Cotton in northwest Texas is worth, perhaps, 25 points less than similar cotton at Dallas, making middling seven-eighths inch in northwest Texas worth about 8.50 Monday. Here, then, is a range of over one cent a pound for location alone.

As may be readily deduced from the foregoing, if the ten-market average price for middling seven-eighths inch cotton were nine cents, a large portion of that part of the crop which will be eligible for the nine cent loan—such part constituting about two-thirds of the crop—would doubtless be worth more than nine cents a pound in the open markets of the South, because of superior quality or superior location. To be sure, cotton of only middling seven-eighths inch quality, and even some cotton of slightly higher value, located in the relatively low value areas of the interior of the western part of the belt, would be worth less than nine cents, but such cotton would doubtless constitute a minor portion of the cotton eligible for nine cent loans. The same considerations apply, in greater or lesser degree, relative to loan values, to the lower grades in the better staples which are eligible for loans of seven and three-quarters cents, and to middling and higher grades in thirteen-sixteenths inch staple which are eligible for eight cent loans. Hence, the belief is expressed in some usually well informed trade quarters that only a modest amount of cotton will go into the loan stock, except in the event of a substantial decline, of such proportions as would carry the prices of cottons which are relatively high priced—high, that is, relative to loan values—down to or below such values.

The Government program provides not only for loans, but also for adjustment payments to compensate growers for the decline in the selling price of the staple. The Government announcement states that such payments are, in each instance, to be equal to the difference between the ten-market average price for middling seven-eighths inch cotton and twelve cents on the day when the grower sells. However, it is stipulated that the maximum payment is to be three cents a pound, the payments are to be made only to those growers who co-operate in the Government cotton control program of 1938, and such payments will not be made on more than 65 per cent of the base production of the growers unless the funds at the disposal of the Government for this purpose permit payments on a larger percentage of the base production, in consequence of the adjustment payment rate per pound being reduced by market values being advanced.

The term "base production" as used in this announcement indicates a total of about 16,150,000 bales for the entire belt. It may be readily calculated that if, say, 85 per cent of the growers, who carry base production allotments aggregating 85 per cent of the total base production, make themselves eligible for adjustment payments by co-operating in the Government control program of 1938, the total base production of these growers will be about 14,025,000 bales. If payments are made on 65 per cent of the base production of such growers, the total number of bales on which such payments are made will be about 9,116,000. If a farmer grows less than 65 per cent of his base production, he will, presumably, become entitled to payments only on that amount of cotton which he produces.

Under the terms of the Senate Resolution providing for adjustment payments, a total of $130,000,000 is made available for this program. It may be calculated that this would be sufficient to pay three cents a pound, or $14.34 per 478-pound net weight bale, on 9,065,000 bales. Thus, the Government could make adjustment payments, at the maximum rate of three cents a pound, on 65 per cent of the base production of eligible growers, if 85 per cent of the total base production is held by growers who make themselves eligible for payments by co-operating next year. Adjustment payments of three cents a pound would be called for only with a ten-market average price of nine cents. As a matter of fact, it would seem to be impossible for adjustment payments to average the full three cents a pound, since, perhaps, 1,500,000 bales or more of this crop have already been sold by the growers during the past few weeks, with the ten-market average price ranging from 11.24 to 9.16 cents, and averaging 10.22 cents. If the adjustment payment rate should average only two and a half cents a pound, or $11.95 per 478-pound net weight bale, the Government could make payments on about 10,900,000 bales, and still keep within the $130,000,000 total distribution.

Since the adjustment payments are not to be made until after the growers have given proof of their compliance with the 1938 cotton control program, they cannot be made until some time in the spring or early summer of next year. The adjustment payments and the loans are entirely separate from each other. Growers will not establish a basis for adjustment payments until they sell their cotton—since, in each instance, the adjustment payment will be calculated on the basis of the ten-market average price for middling seven-eighths inch cotton on the day when the grower sells—and the eligibility of a grower for an adjustment payment will not be affected by the point of whether or not he has borrowed from the Government on his cotton before selling it. The program provides, however, that growers must sell their cotton before July 1st of next year in order to become eligible for adjustment payments on it, and, hence, growers who put cotton into the loan stock must withdraw it from the loan stock and sell it before July 1st of next year to obtain adjustment payments on it.

It will be noted, that if the ten-market average price for middling should go below nine cents—this entailing the maximum adjustment payment of three cents a pound—growers will receive less than 12 cents basis middling in selling cotton on which they are entitled to adjustment payments. On the other hand, when the ten-market average is 9 cents or over, growers will receive only 12 cents a pound, basis middling, on such cotton, no matter how high the ten-market average price may be, up to 12 cents. It is believed in various trade quarters that this will result in free selling by growers, particularly of that portion of their cotton on which they will receive payments, so long as the ten-market average price is 9 cents or higher. On that portion of their cotton on which the growers are not entitled to adjustment payments, some growers, it is thought, may show more reluctance to sell. One deterrent to putting cotton into the Government loan stock will doubtless be the fact that loan charges will accumulate against it.

Stein, Hall & Co. Establish New Laboratory

Stein, Hall & Co., Inc., have established a new laboratory at Providence, R. I., fitted out with complete and modern equipment for the scientific solution of sizing, printing and finishing problems.

The work will be in charge of Mr. F. G. LaPiana, assisted by Mr. David Truax, Mr. Frank W. Perry will be the resident chemist. All of these men have had a wide experience in the textile industry. Close liaison will be maintained with the main Stein Hall laboratories in New York.

The decision to open the new laboratory is in line with the Stein Hall policy of expanding its technical service. In the past, New England manufacturers have utilized the New York laboratory facilities, which are still available to them. However, it is felt that the establishment of modern laboratory close at hand should prove of even greater value and convenience.

As importers, distributors and manufacturers of every type of starch material used in textile processing, Stein, Hall & Co. also maintain well-equipped laboratories at Long Island City, Charlotte, N. C., and Chicago.

The announcement was also made of a new and enlarged research program at New York laboratory. Mr. M. Cushing has been engaged as research chemist, and will devote his time exclusively to pure research in starch and dextrine chemistry, under the direction of G. V. Caesar, laboratory director.

"Banging-Off" On High Speed Looms

ONE of the most common faults in connection with high speed looms is the defect known as "banging off" or "knocking off." This term denotes that the stop rod tongue has struck the "frog" and that the sudden impact has stopped the loom quickly and with a perceptible bang. Both the stop rod tongue and the "frog" form part of the high speed warp protector motion whose function it is to prevent yarn breakage when the shuttle, for some reason, fails to enter the shuttle box, enters incorrectly or enters at the wrong time. Under ordinary circumstances, the arrival of the shuttle into the shuttle box causes the stop rod tongue to be lifted over the "frog" and thus the loom continues in operation. If, however, the shuttle does not enter the shuttle box or only partially enters, and the warp protector fails to stop the loom quickly, then, as the sley moves forward, the shuttle will be "trapped" between the reed and the fell of the cloth and will break the warp threads. It is obvious therefore, that the loom must be stopped almost instantaneously when the shuttle fails to enter the shuttle box correctly, if warp breakages are to be avoided. In general, the loom must be brought to a standstill within the time that it takes the sley to move approximately one inch, or more precisely, during the time that the reed travels from a point about 2½ inches from the fell of the cloth to a point about 1½ inches from the cloth fell. For an ordinary loom with a crank and sley sweep of 5 inches and running at 198 picks per minute the time in seconds to stop the loom would be:

$$\frac{60}{198 \times 10} = \frac{1}{33} \text{ seconds}$$

Although "banging off" constitutes a very necessary safeguard against shuttle "traps" or smashes it should only take place at infrequent occasions, such as when the passage of the shuttle is obstructed by yarn entaglement in the warp shed, and when an unavoidable failure of the picking action or the shuttle traverse occurs. It is of the utmost importance to see that "banging off" due to the defective operation of the loom mechanism is prevented or reduced to the minimum, for apart from causing a decrease in output due to frequent stoppages of the loom, the severe stresses which it imposes on many parts of the loom, result in damage and often breakage of the parts concerned.

There are, of course, a great many causes of "banging off" and the defect may result from many causes, each of which, in itself, may or may not be sufficiently pronounced to cause "banging off." It is proposed, therefore, to deal fairly comprehensively with the various causes of "banging off" and to indicate how these faults may be ascertained and rectified and how they may be kept well within reasonable limits. In order to facilitate this purpose the causes of "banging off" will be grouped and dealt with under the following five headings:

1. Defects of the warp protector motion.
2. Defects of the picking motion.
3. Faulty sley and sley fittings.
4. Defective shuttles.
5. Miscellaneous defects.

The working of the high speed warp protector motion is quite simple. If the shuttle enters the shuttle box correctly, it presses back the "swell" which projects into the box, and this action on the "swell" causes the finger, adjustably fitted on the stop rod, to be pushed backward, thus lifting the stop rod tongue clear of the "frog." If the shuttle does not enter the box, the swell is not pushed backward, and the tongue strikes the "frog" and moves the latter a short distance along the loom frame. The movement of the "frog" pushes the bar and presses the starting handle to the "off" position, thereby stopping the loom. The movement of the "frog" also applies the back brake through the brake rod. The concussion caused by the impact of the tongue with the "frog" is reduced by the "frog" pushing the pin against the strong spring.

One of the principal defects which causes "banging-off," is insufficient clearance of the stop rod tongue over the "frog." This may be due to the stop rod or the stop rod bearings being excessively worn, the finger being too far away from the swell or it may be due to the wearing of the swell or swell pins. "Banging-off" may also be caused as a result of the stop rod tongue coming into contact with the "frog" too early, due to a wrongly positioned "frog" or the tongue being too long. If the brake rod is too short, the "frog" will take up a position too near the middle of the loom, while if the stop rod brackets are set too low, or the sley is too low, or if the tongue has been lengthened too much, the tongue will engage with the "frog" before the shuttle has had sufficient time to complete its traverse. The shuttle should be completely boxed when the cranks are at their top center position and when the sley is at the center of its forward sweep. It follows, therefore, that the stop rod tongue should reach the lip of the "frog" just after the sley has passed its center position, when moving forward. If the tongue reaches the "frog" before the sley arrives at its center position or before the cranks assume top center position, then "banging off" is almost sure to occur. Other causes of "banging off" are too much spring pressure on the stop rod finger and tongue, loose stop rod brackets, the stop rod binding in its bearings due to bad fitting, dirt or a lack of oil, and a loosely fitted "frog" which might fit or take up a slanting position.

Defective picking is a frequent cause of "banging off" and should be minimized by careful and fairly frequent examination of the picking motion, especially when a warp has been finished and the loom is empty. The necessary adjustments and replacements can then be effected before the more serious defects which cause "banging off" have arisen. Picking too early must be avoided if "banging off" is to be prevented. A definite timing of the picking motion, however, cannot be given for all conditions of weaving, since apart from the different timings for different types of motions, the timing of the picking motion must conform to the timing of the shedding motion, which varies somewhat according to the type of cloth being

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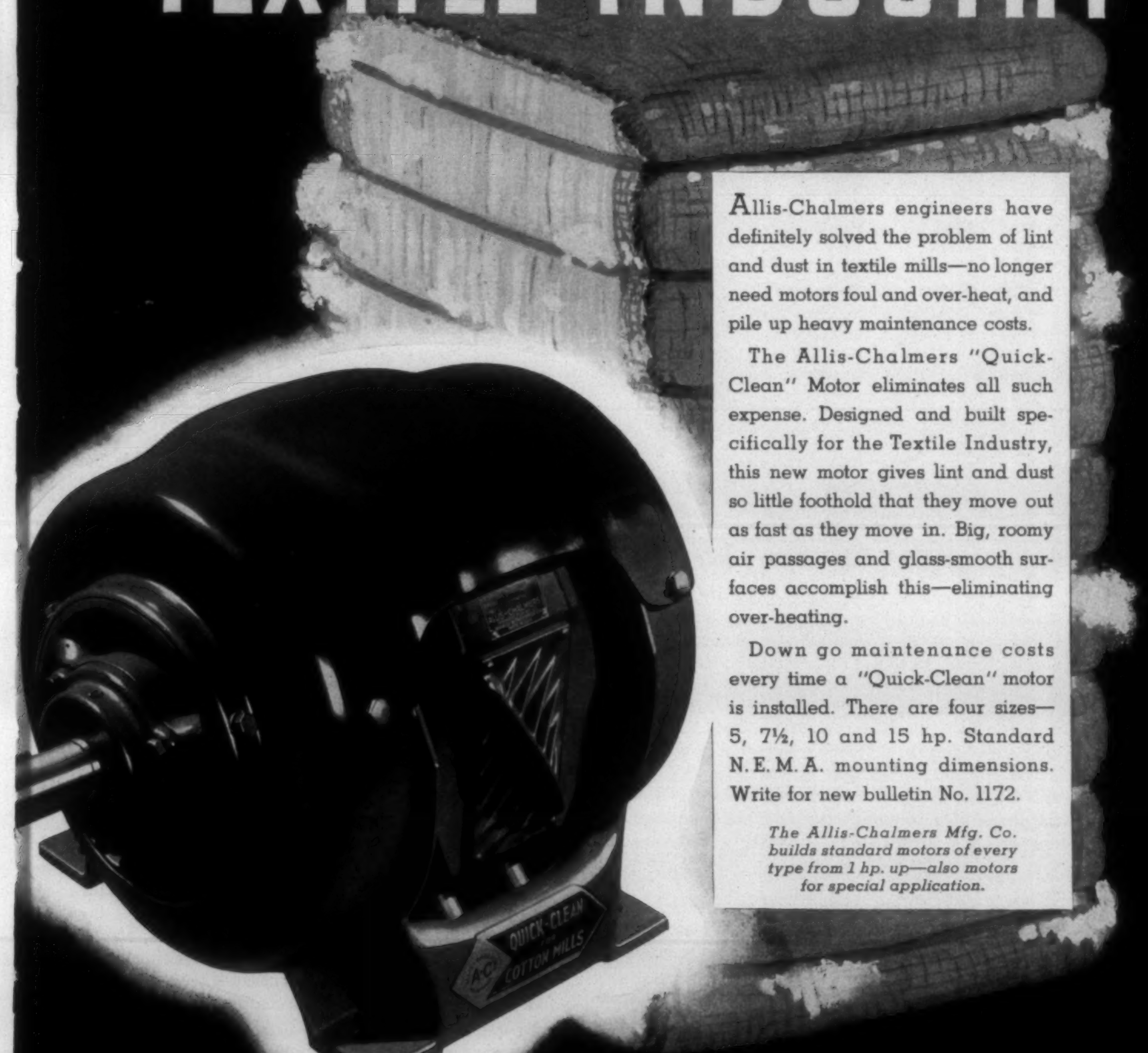

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Scouring of Rayon*

By Robert Zametkin

AT the outset, it might be well to define two terms which, though in frequent use, may convey different meanings to different people. The term "boil-off" to the converter probably means that step in which his goods are most frequently damaged. To the silk dyer boil-off, of course, indicates boiling soap tanks, skeins of grey goods, and the removal of the natural gum of the silk, preparatory to the dyeing. Rayon and acetate processors, probably for no better reason than that their staffs, in the early days, were chosen from the ranks of the silk dyers, rather than those of the wool or cotton, appropriated the term boil-off. And now, whereas the term boil-off as used by silk men, has a very definite meaning, it is used by rayon and acetate processors, one might say facetiously, to cover a multitude of sins. Such divers processes as soaking, mercerizing, dashing, enzyme treatment, and others are often lumped together as boil-off by rayon and acetate processors. Strictly speaking, this is a misnomer, but one so widely accepted that to oppose it would be as tilting with windmills.

In my talk tonight, therefore, in speaking of boil-off, in connection with rayon processing, we shall take it to mean that initial wet process step to which grey goods is subjected, and in which the cloth ceases to be grey goods, and is made ready for dyeing. This is certainly a very broad and perhaps somewhat vague statement, but of necessity, it must be, in order to include under one heading steps so unlike as, for instance, soaking in a diastase enzyme, and, let us say, mercerizing.

Now, in mill practice, it is often found that these various boil-off procedures, effective as they may be in contributing to a satisfactory feel, appearance, pebble, and such like, to the fabric, still leave the goods in no proper condition for dyeing.

To cite an example, I point to the so-called flat rayon crepes. The boil-off of this fabric generally consists of allowing the cloth, in skein form, to soak overnight in a tank of water. This treatment is apparently successful in closing the face of the material and finishing up without the undesirable sleaziness often noted in this type. However, goods so soaked are not necessarily ready to go into dye. The tint may yet be present to a large extent, and all sorts of superficial dirt may be entrapped in the folds; for instance, soil from the hands of the weaver, oil from the looms, and heaven only knows what else may be there. It is for this reason and at this point that scouring may be required.

Before going further, we can here finish with this matter of defining terms. Scouring, then, will be taken to mean that step after the boil-off, in which the goods, though not modified as to its final characteristics, is made clean and ready for dyeing. In most cases scouring will immediately follow boil-off, and precede dyeing. There are, however, exceptions to this, as in the case of certain low count fabrics, in which case the grey goods is loaded on the machine, to be boiled-off and scoured in one step, and, although I have not seen it done, I am told even bleached and dyed in the one operation.

Now let me place the problem squarely before us. Here we have what is a crude thousand to one enlargement of a rayon thread. It is covered with a film of size, is tinted, dirty, and perhaps greasy, and must be made quite clean, if it is to be successfully dyed and finished. Keeping in mind that rayon is a relatively delicate material with certain chemical and physical limits, we have our problem fairly posed.

Now, then, as for this film—we can quite generally expect that on contact with water it will swell, become soft, and as the scouring proceeds and the temperature of the bath rises, go into solution. The tinting that is incorporated in this film may be expected to do likewise. The sulfonated oils that are generally used in most sizes and soaking mixes, being soluble, will also go into solution. So much then, for normal healthy rayon.

Next let us consider rayon that is soiled, that apart from the sizing materials, still contains other foreign material. It is to remove this sort of thing that the alkalies, soaps, solvents and wetting agents that we are all more or less familiar with, come into play. I will attempt to give you the picture of what goes on in a typical scouring bath, that may be made up of one of the commercial scours of the Amzo or Sulfo type, or that may be prepared by the dyer to meet a particular set of conditions.

The essential ingredient of the bath is soap. Now, it is one of the peculiar properties of soap solutions that they cause a decrease of surface tension. In plain English, that means that a soap solution will wet a piece of cloth about three times more readily than will plain water. That helps some because, until you get your cloth wet, you can not begin really cleaning it. However, there is further significance in the decrease of surface tension than this alone. Because not only does the decreased surface tension help wet out the fabric, but it also helps wet the particles of dirt in the cloth. This of course is helpful in that much of the soil is likely soluble and once wet, will go off the cloth, and into solution.

The soap in solution consists of so-called molecular aggregates or colloidal particles. Now there was a very great American scientist by the name of Gibbs, who observed that if a substance lowers the surface tension, the boundary layer is richer in that substance than is the bulk of the liquid. This is just what soap does, and so we may expect to find at the interface between the water and the rayon, and at the interface between the water and the soil particles, a concentrated film of soap.

Now I am going to try to draw you a picture of a rayon fiber with a smirch of soil on it. Due to the decreased surface tension, this fiber is now thoroughly wetted, as are the particles of soil on it. Not only are the particles wet but the water has penetrated into the minute spaces between the particles of which this smear consists. Now then, if we were to look at this smear of dirt under a "super-super" microscope, we would find each particle surrounded by a film of water, and in ac-

(*Continued on Page 12*)

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*Presented at meeting of New York Section A. A. T. C. C.

PARTNERS

HERE is a familiar scene in American industrial plants today—the Gulf lubrication engineer working in cooperation with a plant man who is responsible for production.

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GULF INDUSTRIAL LUBRICATION

"Banging-Off" On High Speed Looms

(Continued from Page 8)

woven. The ordinary cone overpick motion is generally timed so that the picker commences to eject the shuttle when the cranks are about 60 degrees past their front center position. At this point the warp shed is fully open and there is ample time for the shuttle to reach the opposite shuttle box before the stop rod tongue can contact with the "frog."

Weak picking is a common cause of "banging off." In this case the shuttle, although ejected soon enough from the shuttle box, fails to arrive at the opposite box in time to operate the warp protector motion. Weak picking can be caused by one or more of the following defects; excessively worn picking nose-bit, the picking bowl too high, the picking tappet an/or bowl not set in proper relation to each other, flat places on picking bowl, a loose picking stud, the picking shaft binding or not properly positioned, a picking stick loose, cracked or in a wrong position in the clamp, and the picking band too slack or too tight. If any of these defects are present a careful inspection of the picking motion will result in their detection and the appropriate adjustment or renewal can then be carried out. Too strong a pick will also cause "banging off" for the tendency will then be for the shuttle to arrive early in the shuttle box and to rebound slightly before the stop rod tongue has reached the "frog." This backward movement of the shuttle will result in the tongue occupying a low position and as the sley moves forward the tongue will strike the "frog" and result in "banging off." Other defects of the picking motion which result in "banging off" are, the picking "shell" or "scroll" becoming loose from the boss, a slack key in the picking boss, and the loosening or breaking of any portion of the picking mechanism. A picking motion in good condition and correctly timed and set, will do much towards keeping "banging off" within reasonable limits and is a necessity if a loom is to operate efficiently and well.

Defects of the Sley

A smooth and easy traverse of the shuttle is essential and anything that impedes the passage of the shuttle or causes it to travel in an erratic manner, will certainly tend to produce "banging off." The sley should, therefore, be true to template in every detail. Care should be taken to ensure that the raceboard and the box plates are in correct alignment and that the reed and the box backs are properly in line. Worn race boards, worn box backs, box plates too high or too low, the reed overfacing the box backs or vice versa, and the angle between the reed and the race board not in conformity with the bevel of the shuttles, will result in an erratic traverse of the shuttle and this is conducive to defects such as "banging off," as well as the shuttle flying out or turning over. The shuttle boxes should be kept perfectly clean, and the box fronts correctly positioned to the width of the shuttles so that the shuttle will press back the swell effectively as it enters the box. It is advisable to have the shuttle boxes a little wider at the mouth than at the outer end.

Particular care should be taken in the checking of the shuttles in the shuttle boxes as an improperly checked shuttle will result in the shuttle rebounding from the shuttle boxes, the necessity of an excessively strong picking action, badly running shuttles and frequent "banging off." The correct setting of the spindle and also the shuttle guide on the box back is necessary if the shuttle is to travel satisfactorily. The spindle should be a little higher (about 1/8 of an inch) at the stud end than at the outer end, in order that the picker will rise slightly as it moves forward and in doing so will lift the back end of the shuttle, thus facilitating the downward traverse of the leading end of the shuttle in the direction of the shuttle race. It is also usual to have the spindle stud end of the spindle about 1/8 of an inch further away from the box back than at the outer end, in order to facilitate the passage of the shuttle in the backward direction in which the sley is moving when the shuttle is ejected from the shuttle box. The shuttle guide should be set to the depth of the shuttle at the outer end of the shuttle box but about 1/4 of an inch more than this measurement at the mouth of the box. This allows the back end of the shuttle to be slightly raised as it is ejected from the shuttle box. Care should be taken in the setting and upkeep of all sley fittings in order to facilitate the satisfactory traverse of the shuttle and thus minimize "banging off."

Cracked, broken and mis-shapen pickers are a frequent source of "banging off" and when this defect occurs it is advisable to examine the pickers in the first instance. Pickers should be gouged sufficiently before they are fitted, in order to ensure that the shuttle is ejected satisfactorily and also to ensure that the shuttle can go far enough into the box to press back the swell sufficiently to raise the stop rod tongue clear of the "frog." Banging-off is also likely to occur if the spindle holes in the picker have been made too large or if they are excessively worn, if the reeds are ill-fitted, especially when packing pieces are used because of the narrowness of the reed as compared with the reed space of the loom. Crooked spindles, dirty and loose spindles, loose box plates, the race board "sprung" or loose from the sley sole, and the sley too low at one or both sides, owing to the loosening of the bolts which fasten the sley swords to the rocking rail, are not infrequent causes of this defect.

Shuttle Defects

A faulty shuttle or shuttles are often the cause of a loom "banging off" and great care should be taken in their selection, fitting and maintenance. If a set of shuttles differ in width, only one can be correctly accommodated in the shuttle box and the other or others must be either too tight or too slack in the box. These ill-fitting shuttles will cause "banging off." If they are too tight in the shuttle box, an excessively strong picking action will be required to eject them from, and force them into, the respective boxes. If they are too slack it will not be possible to retain them in the correct position in the box and when properly boxed their action on the swell may not be sufficient to raise the stop rod tongue clear of the "frog." Shuttles which have become well worn at their base are also a fairly frequent cause of "banging off." Owing to the slightly hollowed nature of the shuttle race, the bottom of the shuttle becomes convex in course of time and if this defect is not attended to, the traverse of the shuttle will become erratic. Shuttles in this condition should be planed straight or trued-up, and if very badly worn, replaced.

(Continued on Page 24)

Cotton Estimate

Washington, Sept. 8.—The Department of Agriculture reported a cotton crop of 16,098,000 bales of 500 pounds each is indicated for this year, basing its estimate on the acreage and condition of the crop September 1st.

The Census Bureau announced 1,871,403 running bales of cotton of this year's growth, counting round bales as half bales, had been ginned to September 1st, compared with 1,374,247 a year ago, and 1,135,090 two years ago.

The acreage remaining for harvest, condition of the crop on September 1st and indicated production, by States, follow:

Virginia, acreage 64,000; condition 84 per cent of a normal and indicated production, 40,000 bales; North Carolina, 1,074,000; 75 and 686,000; South Carolina, 1,635,000; 67 and 856,000; Georgia, 2,631,000; 72 and 1,321,000; Florida, 113,000; 79 and 40,000; Missouri, 488,000; 78 and 37,000; Tennessee, 941,000; 78 and 521,000; Alabama, 2,558,000; 77 and 1,310,000; Mississippi, 3,344,000; 80 and 2,027,000; Louisiana, 1,547,000; 78 and 873,000; Texas, 12,667,000; 76 and 4,622,000; Oklahoma, 2,569,000; 62 and 858,000; Arkansas, 3,056,000; 74 and 1,564,000; New Mexico, 136,000; 91 and 128,000; Arizona, 269,000; 88 and 244,000; California, 614,000; 91 and 642,000; all other States, 30,000; 82 and 19,000; lower California, 140,000; 84 and 60,000.

Jap Rayon Output Second Only To America's

Washington.—The Commerce Department announced Japan produced 161,067,000 pounds of rayon during the first six months of 1937 compared with 120,211,000 pounds for the corresponding period of 1936, a gain of 34 per cent.

Commercial officials said during the first half of the year the Japanese industry worked under restrictions on production equivalent to 32 to 35 per cent capacity.

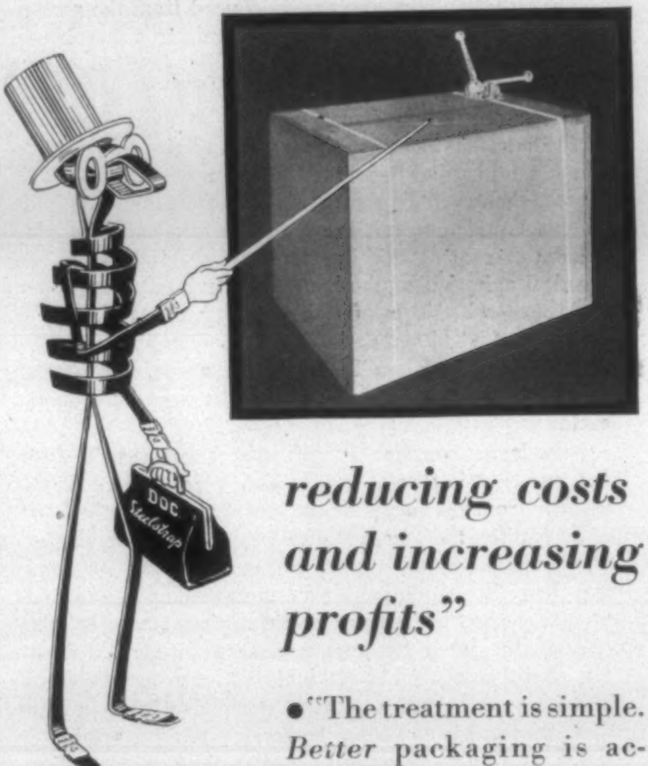
A survey showed production increases planned by rayon yarn companies in Japan from May to September indicated aggregate prospective expansion of daily production by more than 500,000 pounds which would bring the industry's projected annual capacity up to 475,000,000 pounds.

This compares with output during 1936 of 275,000,000 pounds. In 1936 Japan ranked second among world producers of yarn, being exceeded only by the United States' 2,776,625,000 pounds.

The report said production of staple fiber has increased more rapidly in Japan than in the United States. Exports of rayon yarn in the first half of the year totalled 25,701,000 pounds, a gain of 792,000 pounds over shipments in a corresponding period of 1936.

Exports of rayon piece goods during the first half of the year totalled 239,631,000 square yards, a decrease of 18,010,000 square yards but a gain of nearly 3,000,000 yen in value compared with shipments in the corresponding period of 1936.

"... then Acme Steelstrap was applied here, thus—



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Scouring of Rayon

(Continued from Page 8)

cordance with Gibbs' law, in this film a concentration of soap particles.

The situation is pretty much deduced from the reasoning of Gibbs' Law, etc. Anyway, this is a particle of soil, and here is another particle of soil. Here we have a sea of water in the scouring bath, and the film of water has a concentration of soap particles at the soil particle, at the interface between the water and the soil particle, which would make the thing look something like this. Of course, there will be soap particles throughout the body of this liquid, but not nearly in the concentration that will be present at this interface. Now, due to the mechanical agitation of the bath, the elevated temperature, and the so-called Brownian movement, these dirt particles will be wafted hither and thither, through the bath, and be prevented from readhering to the goods, and to each other by the protecting layer of soap particles surrounding each.

Now let us consider a fabric that is not merely dirty, but one that is greasy or oily also. The source of this may be from the hands of the weaver or from the loom, or as is often the case, in certain types of goods, deliberately applied in the sizing process. The oil or grease may be either saponifiable or non-saponifiable, and must in either case be removed. In getting after the non-saponifiable oil it becomes necessary to use a solvent. For this purpose carbon tetrachloride, ethylene dichloride and some of the middle range petroleum distillates often find application. These, however, are not soluble in water, and must be made so, before they may be effectively used. This can generally be satisfactorily accomplished by stirring the solvent into sulfonated oil, and then diluting with water to the required volume. Looking at such a solution through our "super-super" microscope we should see our solvent particles surrounded by a film of water. This film, in accordance with Gibbs' rule would be richer in sulfonated oil particles than the bulk of the solution, and might be represented thus:

The solvent droplets in the scouring bath will be in constant motion, are prevented from coalescing by the protective layer of sulfonated oil particles, and on coming in contact with the oil or grease spots on the fabric exert the expected solvent action.

The question might arise, Why the particles form on the outside, and what would happen if they lined up on the inside. Well, if they were to line up on the inside you would have a situation like this (illustrating on blackboard), with the particles on the inside. As the droplets of insoluble solvent, due to the heat and agitation of the bath—and being in constant motion—bumped into each other, the obvious thing that would happen would be that the two would join, they would coalesce, and the emulsion would break. That gives fairly good evidence of the fact that they line up on the outside like this. And then there is another reason beyond that. Apparently it has to do with the relative ability to be wet by the water or by the solvent. There is good evidence of the fact that soap, for instance, will be more readily wet by water than it will by benzine, and that it is more readily wet by the water, again, tends to line up the particles on the outside, rather than the inside.

The saponifiable fats or oils that may be present are taken care of by the alkali in the scouring bath. This will always be present as a result of the hydrolysis of the soap or, if more than this is required, deliberately added in the form of soda ash, di-sodium-phosate, or any one of the many suitable alkalis. The action here is simple, being one of straight forward saponification—insoluble oil plus alkali yielding a soluble soap plus glycerine.

I hear that now there are a number of sizes that are being used by the weavers that contain red oil. In a case like that the saponification would yield soluble soap and a molecule of water.

The action of the alkalis and solvents hinge of course on the fabric as well as the soil in it, being thoroughly wet out. Unless wet, it is impossible for the alkali and solvents, etc., to make contact and to do their work. Earlier I indicated that soap was an effective wetting agent. In some cases, however, it may not be effective enough to

(Continued on Page 24)

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Personal News

A. L. Saunders is the new superintendent of the knitting division of Clyde Fabrics, Inc., Newton, N. C. He succeeds R. W. Knox, resigned.

C. R. Moore, formerly overseer of spinning at Chicopee Manufacturing Company at Gainesville, Ga., is now overseer of spinning at Cedartown (Ga.) Yarn Mills.

I. S. McManus, superintendent of Johnston Manufacturing Company, Charlotte, N. C., was operated on for appendicitis September 3rd. He is reported as getting along fairly well.

Roland Gantt, formerly connected with the Dover Mills Company, Shelby, N. C., recently accepted the position as cloth room overseer of the Springs Cotton Mills, Kershaw, S. C.

Personnel Changes At Bibb Manufacturing Co.

Several transfers and promotions were announced last week at the Porterdale, Ga., plants of the Bibb Manufacturing Company.

L. M. Thompson, employed by the Bibb at Bibb City for several years, has been made shift foreman in Osprey spinning at Porterdale, succeeding P. S. Leach, resigned.

Berns Shaw, shift foreman in spooling at Osprey for some time, has been promoted to shift foreman in spinning, succeeding John Statham, resigned.

Sam Hogg, who has been shift foreman in Osprey carding, has been transferred to shift foreman in Osprey spinning.

Charlie Haggard, who has been shift foreman in Porterdale Mill card room, has been transferred and made shift foreman in the card room at Osprey Mill.

Cal Adams, formerly with the overhauling crew, has been promoted to shift foreman of the picker room.

Seed Cotton Drying Process

At the cotton-ginning laboratory, Stoneville, Miss., operated jointly by the Bureaus of Agricultural Engineering and Agricultural Economics, tests are being conducted on drying seed cotton, cleaning and extracting, effects of gin-saw speeds and seed roll densities on the quality of ginned lint, and other related subjects.

As a result of the studies of methods of drying seed cotton begun in 1926, a new process has been perfected, called "the Government process," which involves the following features, as set forth in Miscellaneous Publication 239 of the U. S. Department of Agriculture:

"(1) The damp and seed cotton is treated with a continuous current of hot air at the rate of from 40 to 100 cubic feet of hot air for each pound; (2) the cotton is exposed to the drying process for different periods, usually from 15 seconds to three minutes, depending on the design of the drying apparatus; (3) the temperature of the drying air should preferably be between 150 degrees and 160 degrees Fahrenheit for cotton handled during the early part of the ginning season, although temperatures as high as 200 degrees have been used satisfactorily for late-season wet cotton."

A vertical drier embodying this process has been designed which has proved of great value in improving the quality of the lint and reducing the power requirements of cotton gins, when damp seed cotton has to be handled. This drier has no moving parts and readily dries cotton that is not excessively wet. Very wet cotton can be dried by passing it through the drier twice. Cotton is forced into the top of the drier tower by air blast along with a quantity of heated air, and moves down over a series of floors or shelves to the bottom and from thence is carried in an envelope of hot air to the gins.

More than 200 driers of this type have been installed in commercial gins and from a third to one-half million bales of wet cotton were dried by this process during the 1935-1936 ginning season. The benefits comprised increases in value of the ginned lint estimated at from 60 cents to $5 a bale, avoidance of chokages and other interruptions in operation of gins, and savings in power usually sufficient to offset the power required to operate the drier.

Textile Industry Will Feel War, Experts Say

Washington.—Cotton experts at the Agriculture Department said the conflict in the Far East was expected to disturb the cotton textile industry in both China and Japan.

Referring to the conflict as "a war," the Bureau of Agricultural Economics said "The Chinese cotton manufacturing industry is concentrated to a considerable extent at Shanghai and at Tientsin."

"Both of these areas are in the center of large-scale warfare," the economists said, "and it seems likely that the production of cotton goods along with almost every other form of economic activity has been greatly disrupted."

Japan was the largest foreign buyer of United States cotton in the marketing season that ended with July. It took 1,550,000 bales valued at $106,365,000. This was more than a fourth of the total United States cotton sales abroad.

China took 14,000 bales of American cotton last season. Its imports from this country have declined steadily in recent years as domestic production advanced.

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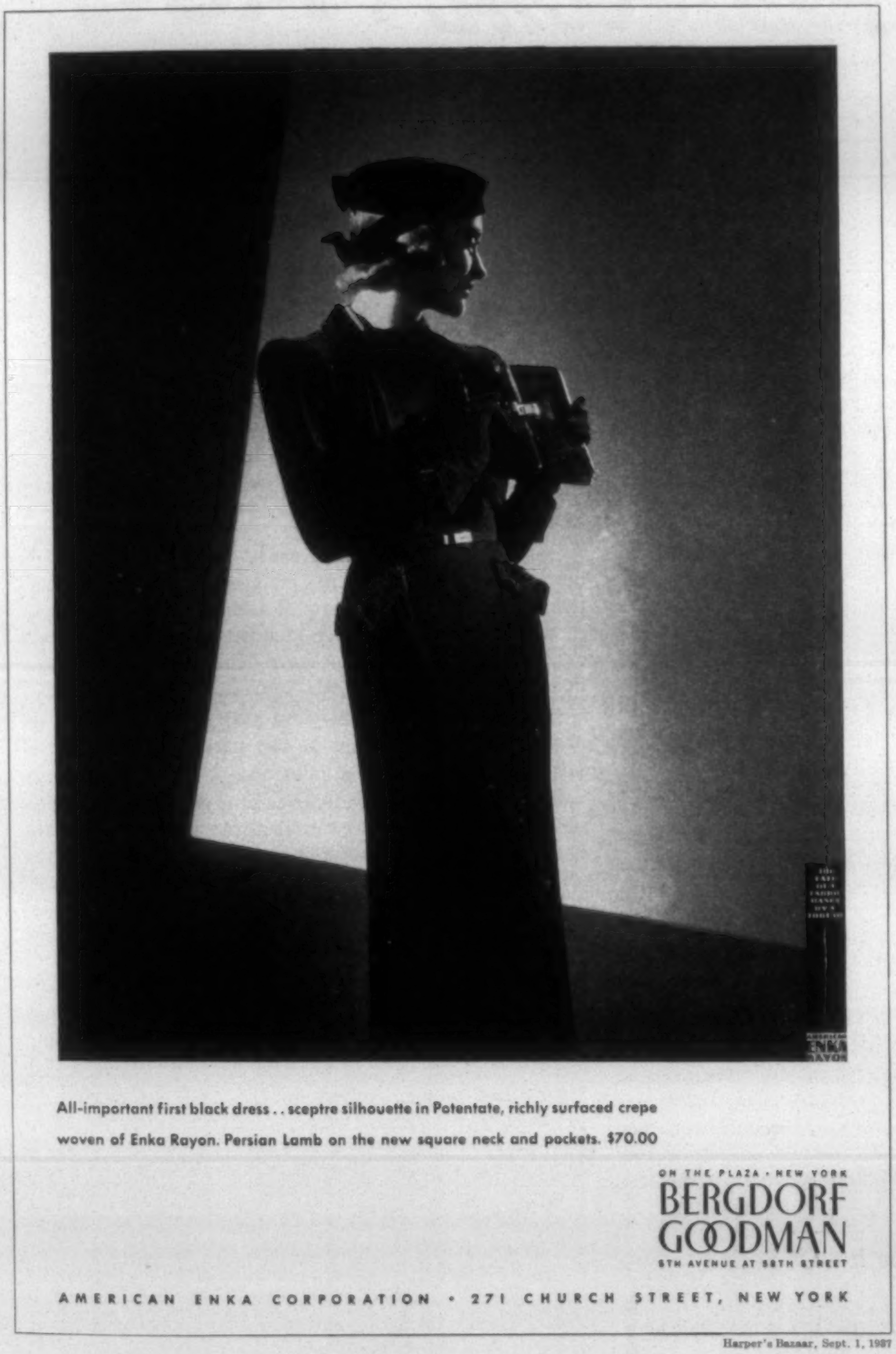

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Problem PAGE

Devoted to Practical Questions and Answers Submitted by Our Readers

Wants Data On Beaters

Editor:

We would like to have some discussion from your readers as to what is the best speed for a three-blade Kirschner beater, and what would be the best blows per inch for cleaning purposes on bright middling 15/16-inch staple cotton. This is for single process Saco-Lowell pickers, and is going into hosiery yarn. "ENQUIRER."

Reply To J. R. Roberts

(Loop Selvage Wire Trouble)

Editor:

I do not know any way to help Mr. Roberts with his wire breakage, since he did not state the size wire or the kind of wire he is using, but I may be able to make a suggestion that will save him some time when replacing broken wire.

If he will buy his wire on spools, and then mount the spools on the loom so that when a wire breaks the only thing that will be necessary will be to unwind enough wire from the spool to make up for the broken part, he will find that his time for replacing broken wire is greatly reduced.

Without knowing the type of loom he is using it would be impossible to go into detail on the mounting of the wire spool, but the master mechanic should be able to do this without too much trouble. The main point to watch out for is getting either a ratchet, or enough tension on the spool so that the wire won't unreel while the loom is operating.

With the mounting of such a spool, the only work involved in replacing a broken wire is the pulling of the wire from the spool to the cloth, and holding it to get the wire into the loop. "OSNABURG."

Reply On Identification Of Stains

(Due to the fact that several weeks have passed since this question was published, the question is repeated here with the answer.)

Editor:

We are having a certain amount of dark threads in our cloth which we believe originate in the roving from such things as extra heavy crayon marks (not red crayon), soot from passing switch engine coming into speeder room, dirty or oily waste getting in roving. Could some chemically trained reader suggest a specific method of positively identifying each of these defects so that there would be no doubt as to the exact cause of the trouble. I might add that soaking in carbon-tetrachloride has no effect on removing these discolorations. Boiling and washing in plain soap and water weakens but does not remove the stain. J. L. D.

Reply

Editor:

J. L. D., in your issue of August 5, 1937, inquires concerning identification of stains.

One of the most common causes of stains is the black lubricating oil from bearings containing fine metallic particles caused by the grinding of surfaces of bearings. Although carbon-tetrachloride, solvents and spot removers easily remove the oil, they leave behind the metallic particles practically untouched.

Boiling and washing in plain soap and water may remove mechanically some of the particles that are not deeply embedded.

Incineration of the sample carefully so as not to disturb the structure of the cloth, in the way old-fashioned gas mantles were incinerated, leaves a white ash in the case of organic stains such as soot from passing engines, mildew, organic dyes, et cetera, which are completely incinerated. Metallic particles become oxidized and leave a reddish, rusty ash.

If the crayons were made with water soluble organic dyes their stains could be removed leaving only the white chalk, but most of them are made with mineral pigments, which will stand incineration and leave whichever color the oxidized pigment might show. PAUL SEYDEL.

How Compute Production On Spinning Frames?

Could someone give me an easy method of figuring the number of spinning frames to put on each count when there are a number of different counts needed in the weave room. While a method of arriving at the proper number of warp frames on each count would be appreciated, I am primarily interested in filling.

I do not have enough quills and boxes to store any great amount of yarn and we are running eight different counts of filling. Occasionally, in spite of anything I have been able to do, one or more of the filling counts will run short, or we will get too many quills and boxes tied up on one count. I want to know how to get around this. "GREEN."

One Cotton Row 80 Miles Long

Lake Providence, La.—Out on George Hider's farm there's a row of cotton eighty miles long.

Of course, it isn't straight. If it was, it would run from here to Vicksburg, and forty miles beyond. It is a spiral, starting at the center of a forty-acre plot and spiraling out, mile after mile.

The 80-mile row of cotton isn't just someone's idea of being different. Behind it is something that Farmer Hider's neighbors think may revolutionize farming.

The idea is to cultivate the land almost entirely without the touch of the human hand. Mr. Hider doesn't say he's got that solved; but he's got something pretty nearly that remarkable.

Farmer Hider can arise with the dawn and walk back to his eighty-mile row of cotton. He can start his tractor at one end of the row. Then he can stroll into breakfast, read the papers, go to town, or do what he wants to—and the tractor will keep right on cultivating that row of cotton.

This is one idea that goes round in circles and really gets somewhere. The tractor has attached to it a strong but small airplane wire. The other end is attached to what looks like a small oil derrick in the middle of the field. It is about twelve feet high.

A large pipe, about a foot in diameter, extends from the top, like a smokestack. The outer surface of the pipe is threaded so that it takes the thin wire like a winch takes a steel cable.

By starting the tractor at the outer end of the circle, Farmer Hider has found that the pull of the wire slowly winding about the pipe pulls the tractor steadily inward, following the spiraled cotton row.

The tractor can also be started from the center and work outward, pulling away as it receives slack from the unwinding pipe.

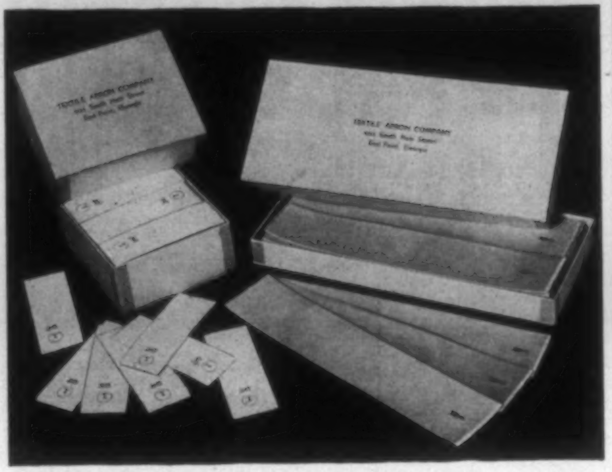
Although the row is eighty miles long, the tractor is never further than an eighth of a mile from the outer edge of the circular forty-acre tract.

New Card and Opener Are Developed For Handling Staple Fiber

Two new machines, a card and an opener, for processing rayon staple fiber on worsted machinery have been developed by the Davis & Furber Machine Co., North Andover, Mass.

In the preparation of rayon staple fiber for both woolen and worsted carding, mills are said to have difficulty in opening and fluffing the hard pressed material from the bales, particularly the high density bales received from Japan. This has led this machinery company to bring out a new rayon opener. The machine is adapted to all lengths of fiber and has a production of more than 1,000 pounds an hour and does not shorten the fibers, it is pointed out.

This machinery manufacturer has also brought out a new card for carding rayon staple on the worsted system. It has a special feed end and breast, single cylinder of 60-inch diameter and is clothed throughout with D. & F. hardened-point metallic wire. It is made with balling head or can coiler. It is stated that the new card clothed with metallic wire turns off a large production and requires less stripping, the sliver being free from neps.



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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

The Tragedy of Shanghai

In the midst of peace in America, we little realize the horrors and suffering and tragedy which is now the daily lot of the citizens of Shanghai, China.

A city of 3,500,000 people, most of whom live in densely packed hovels, hears the incessant explosions of great guns, never knowing when one of the shells will strike their particular dwelling and, in a moment, leave a wreckage not only of bricks and timbers, but of broken and bleeding bodies of women and little children.

All through the night and day they hear the droning of airplanes and from them hurtle down great bombs which tear buildings and homes apart and with them the bodies of innocent victims.

The Japanese battleships stand out in the river and their guns belch great masses of metal and explosives into a city teeming with humanity.

The Japanese airplane carriers incessantly shoot booming planes into the air that they may fly where teeming millions live and drop high explosives among them.

Why is Japan attacking Shanghai? We do not know nor have we ever heard a satisfactory explanation.

It is certain that the Chinese had never made any attack upon Japan and that if the Japanese had stayed upon their side of the water, peace would have continued indefinitely.

Within the last few days, has come the news that two of the great banking institutions of the United States are assisting in financing Japan, in its attack upon China, by making loans.

We are not pacifists but when American bankers exhibit a willingness to make profits out of this unjustified attack upon Shanghai, we think that the time has come for drastic action upon the part of the Government or upon the part of the citizens of this country.

Those who, because of a handsome profit for themselves, are willing to make possible a continuation of the horrors and sufferings now being inflicted upon the innocent men, women and children of Shanghai, should be indicted and condemned by all decent citizens.

We can not be classed as pacifists, but we wish the United States to stay out of war, physically and financially, and we condemn those American bankers who are now financing the Japanese in their unwarranted attack upon China.

Tomorrow there will be propaganda and pressure to send American boys to support the American dollars which are now being loaned for a handsome consideration.

We, of America, will fight when fighting is necessary, and it was necessary in the World War, but we are opposed to sending dollars to finance a bloody carnage and then sending our boys to support those dollars.

Work or Jail

A recent newspaper dispatch reads:

> Raleigh, N. C.—North Carolina jails confined 724 children less than 16 years of age the first six months of this year, the State Board of Charities and Public Welfare states in their report.

While the uplifters close their eyes to the facts and refuse to give consideration to them, no one can truthfully deny that juvenile delinquency has gone hand in hand with child labor laws and as the minimum age for employment has been raised, so has juvenile delinquency and the jailing of children, likewise increased.

Cotton mills never desired or benefited from the employment of children under 16 years of age and we urged the enactment of a 16-year minimum for employment in industries only as gesture towards meeting a mistaken public sentiment but from the standpoint of the child itself, there never was any legitimate reason why the minimum age for employment should not have remained at 14 years.

Debating with Miss Grace Abbott, Chief of

INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE

the Children's Bureau of the U. S. Department of Labor, before a Congressional Committee, some years ago, David Clark received a call down by the chairman when he declared "Miss Abbott does not care whether the children go to jail or go to hell, just so long as they do not work."

Judging by the Raleigh dispatch David Clark was right and the laws enacted under the demand of Miss Abbott and her associates are sending a host of children both to jail and to hell.

Idleness is a great breeder of crime.

Some Yield

THE Government says that the indicated cotton crop for 1937 is 16,098,000, or 228.5 pounds per acre.

We are not in position to dispute the statement of the Government, but 228.5 pounds of lint per acre is some yield.

In 1921 the yield was 132.5, in 1922 it rose to 148.8 and the following year it dropped back to 136.4.

In 1928 the yield was 163.3 pounds per acre and only 164.1 in 1929 and 157.0 in 1930.

If we can now average 228.5 pounds of lint per acre we have made great progress in learning how to raise cotton.

Not even the phenomenal weather nor the large use of fertilizer can explain such an excellent yield. We must have made progress in our methods of seed selection and in cultivation.

Exports will take care of a large portion of the 1937 crop, especially so as there will be a large percentage of low grades which can be sold in competition with the cotton of India and other countries.

We still believe that cotton is a good purchase, for a long pull, around present levels.

John Lewis Speaks

IN view of the well known fact that the United Mine Workers contributed $400,000 towards the election of Franklin D. Roosevelt, the following statement of John L. Lewis in a radio address is significant:

> It ill behooves one who has supped at labor's table and who has been sheltered in labor's house to curse with equal fervor and fine impartiality both labor and its adversaries when they become locked in deadly embrace.

Mr. Lewis is saying that certain things, namely, presidential support and the freedom of union men to attack and coerce non-union men, were bought and paid for but that delivery has not been made in accordance with contract.

On President Roosevelt's behalf we must say that it appeared for a while that he was trying to deliver the goods. He did say that he saw no reason why the steel mills should not sign contracts with the C. I. O. and his close friends among the Governors did withhold protection from non-union workers but unfortunately there were some Governors and some police who still had old-fashioned ideas about a man's right to enter his chosen place of employment.

When John L. Lewis and his associates outraged public sentiment, by unlawful action, they made it difficult for President Roosevelt to render service in repayment of the $400,000.

Public sentiment has definitely turned against John L. Lewis and his C. I. O. and his growling and snarling radio voice has not made friends for him.

Retail Sales

CONVERTERS and wholesale merchants may withhold purchases for a considerable length of time but withholding orders does not reduce the consumption of cotton goods if retail buying and actual consumption has been going ahead.

The following is a comparison of the sales of the leading chain stores for the first seven months of 1936 and the same months during 1937:

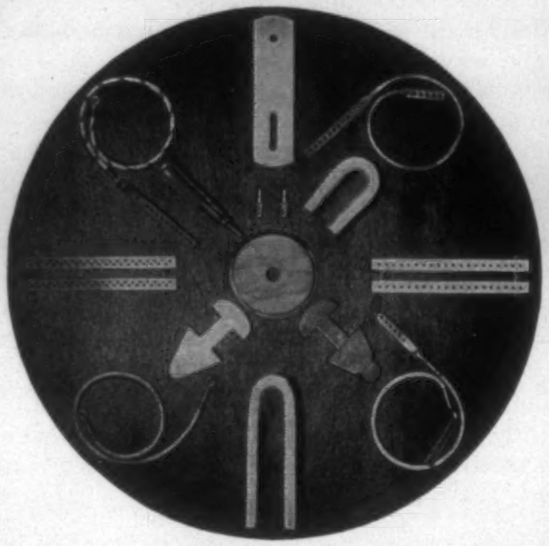
Company	7 Months 1936	7 Months 1937	% Chge.
Sears Roebuck	$251,296,881	$291,648,636	+16.1
Mont. Ward	159,363,320	203,825,772	+27.9
Safeway Stores	202,260,734	231,195,665	+14.3
F. W. Woolworth	147,628,202	158,607,106	+ 7.4
J. C. Penney	124,293,018	135,722,167	+ 9.2
Kroger G. & B.	126,187,059	136,790,019	+ 8.4
S. S. Kresge	75,499,354	81,025,255	+ 7.3
W. T. Grant	48,829,597	50,815,637	+ 4.1
S. H. Kress	43,954,720	45,015,301	+ 2.4
Walgreen	35,445,733	38,512,570	+ 8.7
National Tea	32,635,176	34,405,965	+ 5.4
J. J. Newberry	23,984,903	25,773,854	+ 7.4
G. C. Murphy	18,881,922	22,117,618	+17.1
Lerner Stores	17,974,338	19,594,486	+ 9.0
Western Auto	12,330,000	19,470,000	+57.9
McCrory Stores	20,694,702	21,513,986	+ 3.9
Peoples Drug Stores	11,599,873	12,772,842	+10.1
McLellan Stores	9,403,998	10,202,264	+ 8.5
Melville Shoe	20,692,659	23,447,166	+13.3
Edison Bros. Stores	10,553,671	13,349,387	+26.5
Consolidated Stores	4,605,504	4,995,775	+ 8.5
Rose's Stores	2,301,517	2,574,910	+11.9

Only a portion of the above sales are cotton goods or textiles, but if people are increasing their purchases of such commodities as are handled by the chain stores there is a reasonable assumption that they are also buying textiles.

Reports for the month of July, 1937, show that the sales increase over July, 1936, were, with few exceptions, as good or better than for the seven months, and that would indicate that retail sales are still of large volume.

With a large wheat crop and good prices, it is expected that the Middle West will do a large retail business this fall.

Rice Dobby Chain Co.



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Mill News Items

UNION, S. C.—Union-Buffalo Mills will pay a dividend of $11.75 a share September 23rd, it is reported. This represents $10 on past due dividends and $1.75 current payment.

CONCORD, N. C.—At the Concord Knitting Company, a modernization program is practically completed, including the installation of a water softener, hot water storage tank, new dye house, Fletcher extractor, and rearrangement of machines to give more efficient results.

ALBEMARLE, N. C.—At the Wiscasset Mills Company, an extensive modernization program is under way. Forty full-fashioned knitting machines are being removed after being sold, and when the moving is completed these machines will be replaced with forty Kalio, Karl Lieberknecht machines. In this group of forty machines will be included 26 leggers and 14 footers.

The new machines are 42 guage, high speed, three carrier, and some will be equipped with jacquard attachment.

THOMASVILLE, N. C.—J. E. Jennings made known plans for construction of a new hosiery mill to be located in this section. The new mill will employ approximately 150.

ALBANY, GA.—At the Albany Manufacturing Company work is nearing completion on the construction of the plant, which will manufacture full-fashioned silk hosiery. A. Blum will have charge of operations.

PACOLET, S. C.—The Pacolet Manufacturing Company is having The Textile Shop, Spartanburg, S. C., install their Vacuum Lint and Dust Collector which is designed for their addition section of automatic spooler.

HAZLEHURST, MISS.—A hosiery mill in Philadelphia has written Mayor H. D. Grannerry for information concerning a building site for a hosiery mill here in the near future. The erection of the plant would give employment to 150 or more people. The business club will look into the matter and something definite may be expected soon.

BURLINGTON, N. C.—Dividend checks for the third quarter of the fiscal year have been mailed to stockholders of May Hosiery Mills, Inc, it was learned recently. The payment was at the rate of $1 per share on the preferred stock and 50 cents on the regular common stock, with an additional 50 cents on that issue.

GREENVILLE, S. C.—According to Allen F. Johnson, president, a remodeling and improvement program at the American Spinning Company, Greenville, S. C., representing a cost of approximately $250,000, has been completed. Dwellings in the community were repainted and considerable remodeling work was done in the mill, where some new machinery was installed.

Mill News Items

Rock Hill, S. C.—The Cutter Manufacturing Company is having The Textile Shop, Spartanburg, S. C., recover one of their 12-foot dry cans.

Cliffside, N. C.—The Cliffside Mills, Haynes Plant, is having their slasher units equipped with the "No Drip" Slasher Hoods designed and installed by The Textile Shop, Spartanburg, S. C.

Thomaston, Ga.—Thomaston Bleachery has awarded a contract for construction of a four-story reinforced concrete warehouse, 100 by 100 feet, to cost $75,000.

Newberry, S. C.—Kendall Company has extensive improvements underway at its local plant. At the Mollohon plant, work has been started with Potter & Shackleford, of Greenville, S. C., contractors. The work will cost around $60,000. Completion around the end of the year is expected. Plans include the construction of three large brick warehouses, remodeling of the interior, new stairs on the exterior, new toilets, reroofing, and the installation of a freight elevator.

For the departmental superintendents two large residences will be built and all of the other homes of the village are being painted on the interior and exterior. It is understood that the company has under consideration the construction of a number of new dwellings at both the Oakland and Mollohon plants to take care of additional workers.

Atlanta, Ga.—At a ceremony held recently, 327 employees of Exposition Cotton Mills received awards in the form of service pins signifying the period of continuous service.

More than 2,000, including the approximately 1,200 employees of both shifts, attended the event. Morris Brandon, chairman of the board, acted as master of ceremonies. Ernest E. Dallis, public relations counsel, delivered the principal address, and presented J. A. Miller, president, who made the individual presentations.

There were two employees with a record of more than 45 years' continuous service; three have been with the mill between 40 and 45 years; five between 35 and 40 years; eight between 30 and 35 years; and six between 25 and 30 years. The other recipients of the medals were grouped as follows: 17, 20 to 25 years; 44, 15 to 20 years; 102, 10 to 15 years; and 140, five to 10 years.

Edwin Chandler, overseer of carding, and Fred Netherland, purchasing agent, have records of more than 35 years' continuous service. P. E. Glenn, secretary-treasurer, received a 25-year medal.

J. L. Lawson, village officer, received recognition as the employee with the longest continuous service record, having been connected with the mills for 48 years. His son, Alfred Lawson, has been at the mill continuously for 27 years.

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Textile Operating Executives of Georgia Meet

THE Fall Meeting of the Textile Operating Executives of Georgia, to be held at the Georgia School of Technology on Saturday morning, September 18th, will be featured by a discussion of slashing and weaving subjects, a talk on the new high speed slasher by U. E. Dubois, of Saco-Lowell Shops, a discussion of starches by Walter T. Schreiber, and a discussion of circulating systems by Howard M. Barker, of Atlanta. The annual election of officers will be held at this meeting.

George E. Glenn, Jr., superintendent, Pepperell Manufacturing Company, Lindale, Ga., will conduct the discussion on slashing, following the questions in the appended list, which have been assigned to the Georgia mill men. W. H. Gibson, Jr., general superintendent, Martha Mills, The B. F. Goodrich Company, Thomaston, Ga., will lead the discussion of the questions on weaving.

V. J. Thompson, superintendent, Rushton Cotton Mills, Griffin, Ga., is general chairman of the organization and will preside at the meeting. A. D. Elliott, superintendent, The Trion Company, Trion, Ga., is vice-general chairman. Robert W. Philip, editor of *Cotton*, Atlanta, Ga., is secretary-treasurer.

Several hundred mill men and visitors from Georgia and Alabama and other parts of the South are expected to attend.

The meeting will consist of one session, opening at 9:30 a. m., Atlanta daylight saving time and adjourning before lunch.

The questionnaire on slashing and weaving, which will be covered, follows:

Slashing

1. (a) What is the maximum and minimum amount of stretch that it is safe to have on a slasher? State your yarn numbers, whether or not your slashers are positive-drive, your method of determining the stretch, and your means of checking your counters or other method of measuring the stretch. (b) We would like to have in detail experience of mills in the use of positive-drive creels on slashers.
2. We are interested in securing a discussion on the use of tapioca starch and sago flour in the slashing of yarns. If you are using either of these, alone or in combination with corn starch, please give us in detail your experience and results. If used together, in what proportion?
3. With a circulating system, what will prevent the thinning of the size during the running of the set—with closed coils in the storage kettle and open coils in the size box?
4. Some mills are using aluminum hoods over their slashers. If you have tried out this type of hood, we will be interested in hearing of your experience.
5. Do you vary your size mix from season to season? If so, why, and in what way do you vary it?
6. What have you found to be the best method of running a warp through a slasher so as to keep the resulting waste to a minimum?
7. What causes stuck selvages on the slasher, and how may they be prevented?

Weaving

1. What is the best way of eliminating wear on quill butts by the transferrer?
2. What adjustment or improvement may be made in the let-off on weaving low-count fabrics?
3. (a) What method of loom cleaning and lubricating do you use? If blowing off, how do you prevent blowing oil and grease onto the goods? (b) In using high-pressure grease lubrication, how do you determine the proper amount of lubricant to put in each bearing, and how do you insure that this amount will be applied?
4. How do you clean your harness after they come from the loom, prior to going to the tying-in machine? We would also like to have information on the practice of painting the bars of steel harness, reasons, results, etc.
5. Will there be noticeable effects in the appearance of the cloth, or in the running of the loom, when two-harness looms are timed with the shuttle in the lever or battery end?
6. With more shedding on long draft yarn than on ordinary yarn, what is the remedy to overcome this shedding?
7. Does the bobbin tip support on the loom prevent the filling breaking at the transfer?
8. What causes slack or long-sided cloth?

Monaghan Mill Robbery Believed To Be Solved

Greenville, S. C.—The Victor-Monaghan Mill office vault robbery, in which jewelry valued at $5,000 and a quarter million dollars' worth of stocks and other papers were taken August 13th, is considered solved, it was announced by Sheriff John A. Martin.

The sheriff said two men who had been arrested in connection with the robbery had confessed, another man whose identity was known was being sought, and some of the jewelry and most of the valuable papers had been recovered, some of them from the depths of the Saluda river.

W. C. Williams, 31, who once served an 18 months sentence in the Federal Penitentiary at Atlanta for a post-office safecracking in Denver, N. C., was being held in the county jail. He was arrested in Charlotte on August 25th. Sheriff Martin said he had confessed.

Another man, who was arrested in Spray, N. C., last Tuesday, has confessed, the sheriff said, and has aided in the recovery of some of the jewelry and all of the papers which have been found. He was released under bond as a material witness on the advice of Solicitor Robert T. Ashmore.

The names of none of the men concerned except Williams were divulged.

PLAYFUL PICKINGS
From the Manufacturers' Press

"A Columbia professor now opines that the sum of the parts may be greater than the whole."

"He must have tried to put olives back into a bottle."—*The Staley Journal.*

* * *

"Doctor, I have turned to you as the last resort," exclaimed the wild-eyed patient as the physician drove up to his house.

"What's the trouble?" asked the doctor.

"The ghosts of my departed relatives come and perch on the tops of the fence post all around the orchard. They just sit there waiting, waiting, waiting. What can I do to get rid of them?"

The doctor started his automobile.

"Sharpen the tops of the posts," he prescribed as he drove off.—*Chatham Blanketeer.*

* * *

Visitor: "I can't tell you how delighted I am, Mrs. Giles. My son Reggie has won a scholarship."

Farmer's Wife: "I can understand your feelings, ma'am. I felt just the same whe nour pig won a medal at the agricultural show."—*The Staley Journal.*

* * *

"George," said Mrs. Lovewell to her husband, "I have received a letter from mother saying she is not accepting our invitation to visit us, and saying we do not appear to want her. What does she mean by that? I asked you to write and tell her to come at her own convenience. You wrote to her, didn't you?"

"Yes," said George, "but—er—I couldn't spell that word 'convenience,' so I made it 'risk.'"—*Termaco Times.*

* * *

The doctor was visiting Rastus' wife to deliver her twelfth offspring. While riding along with Rastus he saw a duck in the road.

Doctor: "Whose duck is that?"

Rastus: "That ain't no duck. That's the stork with his legs wore off."—*The Staley Journal.*

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"Banging-Off" On High Speed Looms

(*Continued from Page 10*)

When new shuttles are being fitted they should be tested for both size and weight. A light shuttle, as in the case of one of smaller size, will be easily deflected from its proper course and may not arrive in the box soon enough to prevent "banging off." In addition to the difficulty of adequately controlling the picking and checking of the lighter shuttle the drag of the weft will tend to deflect the eye end of the shuttle away from the reed when the shuttle is traveling across the race board, and thus cause a badly running shuttle and "banging off." Other shuttle defects which cause this defect include shuttle tips slightly out of alignment, incorrect bevel or angle between the shuttle back and base, ridges at the back of the shuttle caused by defective reeds, and warped and dirty shuttles. It is advisable to examine all shuttles at fairly frequent intervals in order that any chipping, roughness, etc., may be attended to and the cause rectified before more serious trouble develops.

Among the miscellaneous causes are defects of the shedding motion which obstruct the free passage of the shuttle across the sley. If one or more of the warp sheds are too small or wrongly positioned in relation to the sley, "banging off" will result. The bottom line of the warp shed should just touch the race board and the top line should clear the top of the shuttle during the passage of the latter through the shed. The timing of the shedding in relation to the picking is very important. If the shed commences to close before the shuttle completes its traverse the shuttle will either be trapped in the warp shed or its speed will be retarded. If the shedding takes place too late then the shed will not be open sufficiently to accommodate the shuttle when it is ejected from the shuttle box.

Erratic driving of the loom, resulting from engine or motor defects, looseness of the loom or line shaft pulleys, the driving belt too slack or unsteady in its action and dirty, unpliable, badly pieced and very dry driving belts, will result in the loom "banging off." Other causes of this defect are loose crank shafts and second motion shaft driving wheels, broken teeth in driving wheels or the wheels not being geared deeply enough. "Banging-off" also occurs fairly frequently when the weaver is starting the loom and this is often caused by the slow starting of the loom due to the strap fork being loose or not pushing the belt from the loose to the fast pulley with a smart action. It is also caused by the weaver starting the loom with the reed too near the fell of the cloth or at a point where the picking will immediately take place.

Scouring of Rayon

(*Continued from Page 12*)

do this job. In this case the various wetting out agents available may be used to advantage. Where they are insoluble, as is pine oil, they may be handled in the same manner as the solvents spoken of earlier. With the soluble ones the procedure is of course obvious.

In concluding I want to say that while I have talked about scouring of rayon, I still have not told you how to scour a rayon fabric. This is because there is no one way. The procedure will vary with varying plant conditions, different types of fabric, and the many types of soil that may be encountered. The nearest thing to a generalized procedure is this: have a well stocked shelf of the various classes of materials that are applicable and when the difficult fabric comes along, try one, try all, till you get the right combination.

Alabama Farmers Protest Cotton Loan Methods

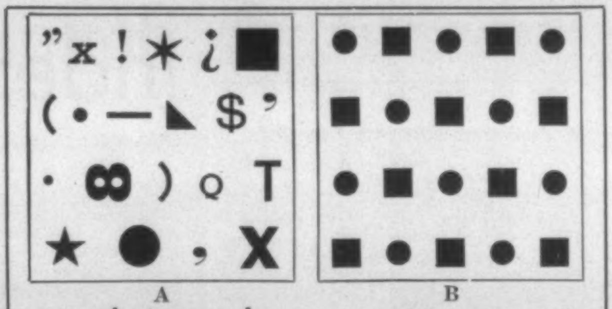
At a meeting in Eufaula, Ala., September 4th, the farmers of Barbour County adopted the following resolutions. Mr. Donald Comer was chairman of the resolutions committee:

We, the farmers of north Barbour County, assembled in Eufaula today, wish to express our disappointment of the plan recently promulgated in Washington, dealing with the protection for this year's cotton crop. We wish to express our approval of the understanding as expressed by our Commissioner of Agriculture, Mr. Goode, at the meeting of Southern States Commissioners of Agriculture, now meeting in Memphis, to the effect that when Southern Agricultural leaders left the capital, it was with the understanding that the loan and parity payment would be made to all cotton growers on all their acreage, contingent only upon co-operation in a control program next year; and we, the Barbour County farmers assembled here this morning, wish to state that whereas it is the expressed purpose of Congress to remove every discrimination and to provide every reasonable help to the end that our farmers may have parity income in this nation, and whereas in the case of cotton, this now requires a program of curtailed acreage and benefit payments for cotton lint and whereas, there is a tremendous concern today over the low prices for cotton seed, and whereas in the Democratic platform adopted in Philadelphia there is a plank as follows:

"We shall continue, as in the past to give adequate protection to our farmers and manufacturers against unfair competition and the dumping on our shores of commodities and goods produced by cheap labor and subsidized by foreign governments."

Now be it resolved that we express our hope that every means in the power of this Administration be exerted to protect by tariff our cotton from the billion pounds of jute that comes into this country annually, substituting for two million bales of our cotton, and prevent by adequate tariff the unfair competition from the tremendous imports of edible oils that come into this country in competition with our cottonseed oil, peanut oil, soy bean oil and all other edible fats and in this resolution we are asking for nothing more in tariff protection for our Southern farm products than that already enjoyed by other major farm products of this country and we are asking nothing except in line with the policy as expressed not so long ago by Mr. Lynn R. Edminister, Chief Economic Analyst with the Department of State, viz.:

"The unvarnished truth concerning the whole agricultural import matter is that the bulk of agricultural products which can be produced in this country at less than a prohibitive cost, have long since been barred out of our markets by high tariffs. No one, so far as I know, seriously proposes that it should be otherwise."



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Increased Alabama Freight Rates On Cotton

Birmingham, Ala.—The Alabama Public Service Commission has authorized railroads to increase freight rates on cotton from 1 to 4 cents per 100 pounds.

At the same time the commission issued a general order of investigation of cotton rates "with a view to establishing a just and reasonable basis for the future."

The rates applicable under the order will take the place of "truck competitive" rates in effect since 1933 and which expired July 1st.

A commission official said the new rates would be 29 to 80 per cent of "normal" or the rates in effect before the "truck competitive" rates were established.

Increases granted were: Up to 75 miles, 1 cent per 100 pounds; 75 to 150 miles, 2 cents; 150 to 250 miles, 3 cents; 250 to 410 miles, 4 cents; 410 to 450 miles, 3 cents; 450 to 490 miles, 2 cents; over 490 miles, no increase in present rates.

Negro Buried Under Cotton

Estill, N. C.—Buried beneath a load of seed cotton, a two-year-old negro lad was almost smothered recently at Estill.

Apparently the child was inadvertently covered with loose cotton after he had gone to sleep in the truck. The cotton was brought to the gin with the child still a part of the load.

Workers at the gin heard the stifled cries and the found the child after a search of some time.

Argentine Cotton Imports Decline

Washington, D. C.—The Commerce Department reported Argentine cotton spinning mills increased cotton consumption and yarn production during 1936 with a corresponding decline in total yarn imports.

Argentine cotton consumption amounted to about 55,000,000, or approximately 31 per cent of the Argentine cotton crop for 1935-36, the report said. Domestic production of yarn, it continued, still does not supply all of the local demand, but the total importation has showed a steady decline over the past four years .

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514 Munsey Bldg., Washington, D. C.
Former Member Examining Corps
U. S. Patent Office

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In carload lots, F.O.B. cars, or our crew will load. Can use all grades, including heavy engines and boilers; pay spot cash. Also buy nonferrous metals. Please get our offer before selling.

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309 River St.
Box 1161 Greenville, S. C.
Telephones 672-673

OVERHAULER WANTED—Have opening for experienced overhauler in carding and spinning. Must be reliable. Give references and record of experience. Address "Overhauler," care Textile Bulletin.

Opportunity for Belting Salesman

Old reliable manufacturer has opening for experienced Southern salesman. Must be dependable, hard worker. Splendid chance for the right man. Give full record of experience and qualifications in first letter.

Address "Belting,"
Care Textile Bulletin

WIRE OR WRITE US for competent Southern and Northern Textile Mill Men. Over 40 years in business. Charles P. Raymond Service, Inc., 294 Washington Srteet, Boston, Mass.

POSITION WANTED—As second hand carding or spinning. Now employed in well known Southern mill. About 33 years experience in cotton mill. Age 46, married. Best of references. Sober, reliable. Address "F. J. S.," care Textile Bulletin.

Travel anywhere..any day on the SOUTHERN for 1½¢ PER MILE

A fare for every purse...!

1½¢ PER MILE **One Way Coach Tickets . . .**
On Sale Daily

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. . . for each mile traveled . . . return limit 15 days
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SOUTHERN RAILWAY SYSTEM

POSITION WANTED — Superintendent, practical in whole mill; technical educanine, nine years on combed broadcloth, plain and fancy; also experienced on carded broadcloth, print cloth and sheetings. Address "Superintendent," care Textile Bulletin.

BARRETT
Specification
ROOFING
DAUGHTRY
SHEET METAL CO.
1109 E. Trade Charlotte

WANTED—Overseer Winding. Experienced in high class white carded yarns, single and ply, on Foster and Universal winders. Address "C. Y. M.," care Textile Bulletin.

For Sale

One regulation size Power Baling Press suitable for baling Cotton Mill Waste. Will pack a bale of strips weighing 500 pounds and over. Price $175.00 F. O. B. Charlotte.

Robert Garnett Co.
P. O. Box 1625
Charlotte, N. C.

For Sale

26—Bahnson humidifier heads complete with wiring, piping and controls.
1—9 x 8 Ingersoll Rand Air compressor and tank.

Address "Box 533,"
Charlotte, N. C.

SUPERINTENDENT open for connection, wants mill that is not getting satisfactory results. Yarn or plain weave man. Long years practical experience. Can see and do things. I. C. S. graduate. Salary no object. Go anywhere. Age 46. 30 years real experience. Address "13," care Textile Bulletin.

Mill Workers Get Bonus

Griffin, Ga.—A profit-sharing bonus of more than $36,000 was distributed to employees of Georgia Kincaid Mills and Lowell Bleachery, recently.

John H. Cheatham, president of the chain of mills, said the bonus amounts to approximately one week's extra salary for employees. Last December the mills paid a similar profit-sharing bonus that totaled $38,000.

Plan Mills for Korea

In view of the cheapness of land and electric power, as well as low wages, the establishment of branches of Japanese industrial concerns in Korea on a large scale is to take place in the next two or three years. A figure of as many as over seventy industrial concerns is quoted, including twenty-five cotton and rayon factories and thirteen chemical factories, requiring 500,000 workpeople.

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65 Worth St., New York
Philadelphia
Chicago
Atlanta
New Orleans
San Francisco

Domestic Export
MERCHANDISING
Joshua L. Baily & Co.
10-12 Thomas St. New York

HOUGHTON STANDARD TOPS
for Rayon and Wool Blends
HOUGHTON WOOL COMPANY
235 Summer St. Boston
Write or Phone Our Southern Representative
JAMES E. TAYLOR, Phone 3-3692, Charlotte, N.C.

Cotton Goods Markets

New York.—Trading in cotton goods markets was listless most of the past week and prices drifted lower. Bidding increased toward the end of the week when raw cotton prices rallied and a few fair-sized sales were put through.

Print cloths sold in larger volume as numerous buyers entered the market for fill-in lots. Sheetings was bought in small amounts by the bag trade, but sales in the aggregate were larger than toward the end of the week. Additional business was booked on osnaburgs.

Mills sold several hundred thousand yards of the 38½-inch 6.25-yard 60x48s at 4½ cents. Later buyers found it increasingly difficult to secure this construction at that price, a number of mills moving up asking prices to 4⅝c. The 39-inch 4-yard 80x80s sold in appreciable quantities at 7¼c for spot and nearby delivery. For several hundred thousand yards of the 38½-inch 5.35-yard 64x60s at 5⅜c. Sources at which this cloth could be obtained at 5¼c diminished greatly and at the close there were few sellers willing to consider bids at that level. Fair-sized lots of the 100x60 carded broadcloths were sold at 7¼c.

Osnaburgs continued to sell in good quantities to makers of fertilizer bags.

Rayon yarns were in moderate demand as weavers and knitters started to cover requirements for the last quarter.

Aside from increased sales of womens wear cloakings and dress goods, wool markets were slow. A number of mills are shutting down as contracts. Underwear mills started showing spring lines and booked a moderate amount of business. Prices showed no change. Burlap markets were quiet. Stocks in Calcutta at the end of August showed an increase of 8,600,000 yards over the figure at the end of July.

Print cloths, 27-in., 64x60s	4¼
Print cloths, 28-in., 64x60s	4⅜
Gray goods, 38½-in., 64x60s	5⅝
Gray goods, 39-in., 80x80s	7⅝
Tickings, 8-ounce	17
Denims	15
Brown sheetings, standard	9
Brown sheetings, 4-yard, 56x60s	7
Brown sheetings, 3-yard	7¾
Staple ginghams	11¼

J. P. STEVENS & CO. Inc.
Selling Agents
40-46 Leonard St., New York

Cotton Yarn Markets

Philadelphia, Pa.—While the cotton yarn marekt is undoubtedly low at the present time, indications point to a firmer market in the near future providing the manufacturers practice curtailment enough to prevent too great an accumulation of stocks during this dull period.

Contracted yarns are not moving any too freely and distributors are stressing the necessity of sharp curtailment in spindle activity. Some spinners are now holding more yarn than is healthy, and from these sources some liquidation is said to be going on at the lows of the market, somewhere around 22c for carded single 10s. Comment is general that much of the contract yarn yet undelivered is so far above current market prices that some arbitration will be necessary to break the deadlock on deliveries.

It might be noted that while yarn prices are low, the business being done at these prices is not large, and consists of small lots which spinners are willing to let go for various reasons. Such business does not seem to represent the firmer market in the course of making. As to deliveries on old contracts, the prices at which they are being taken ought to be compared with last fall when yarns were bought in huge volume rather than with the high priced and comparatively inactive spring market. Such a comparison tends to minimize the possibility of yarn contracts being cancelled or jeopardized in any way.

Offers of low priced yarns hold interest for consumers and yet in confirming their opinion that even lower prices are to be expected usually turn out to be unproductive of any sizeable volume. Some of these low offers apply only to spot or early delivery yarns. In view of the approach of the holidays and the next crop report, large interests generally are not competing for business on the low bases seen in some quarters.

Southern Single Skeins

8s	21½
10s	22
12s	22½
14s	23
20s	25
26s	28
30s	30
36s	34
40s	37

Southern Single Warps

10s	22
12s	22½
14s	23
16s	23½
20s	26
26s	28
30s	30
40s	37

Southern Two-Ply Chain Warps

8s	22
10s	22½
12s	23
16s	25
20s	26
24s	27¼
26s	28½
30s	31
36s	34½
40s	37½

Southern Two-Ply Skeins

8s	22
10s	22½
12s	23
14s	23¼
16s	24½
20s	26
24s	27
26s	28
30s	31
40s	37

Two-Ply Plush Grade

12s	24½
16s	26
20s	27
30s	32

Duck Yarns, 3, 4 and 5-Ply

8s	22
10s	23
12s	23½
14s	24½
16s	25
20s	26

Carpet Yarns

Tinged, 5-lb., 8s, 3 and 4-ply	21
Colored strips, 8s, 3 and 4-ply	22
White carpets, 8s, 3 and 4-ply	22

Part Waste Insulated Yarns

8s, 1-ply	18
8s, 2, 3 and 4-ply	19
10s, 2, 3 and 4-ply	19¼
12s, 2-ply	20½
16s, 2-ply	22½
20s, 2-ply	23½
30s, 2-ply	28½

Southern Frame Cones

8s	22
10s	22
12s	22½
14s	23½
16s	24
20s	25½
22s	26
24s	27½
26s	28½
28s	29½
30s	30

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Reduces lubrication cost and insures longer life of machinery. Will not corrode bearings.

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Withstands heat and will not thin out. Easy to apply.

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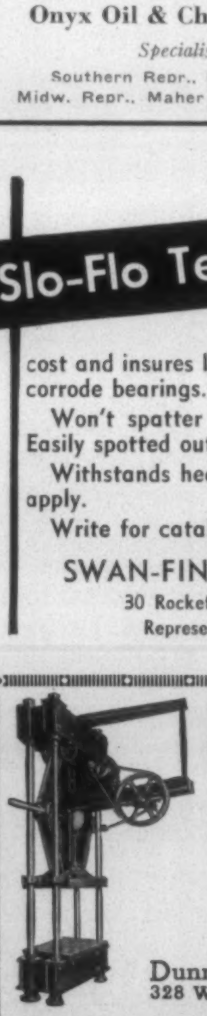

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Visiting The Mills

By Mrs. Ethel Thomas Dabbs (Aunt Becky)

KINGS MOUNTAIN, N. C.

Phenix Mills No. 1—C. G. White, Superintendent

When the Club Members of Phenix Mills No. 1 and No. 2 had their annual outing recently, they went up to Washington, D. C., and had their pictures made on the Capitol steps, with their friend, Congressman Bulwinkle, who is at right front, with Superintendent White.

A glance at this picture is proof enough that officials, superintendents, overseers and section men are all fine representatives of the Old North State.

There is a happy atmosphere at these mills that is very complimentary to the management. These mill communities have a splendid social and religious life, and everyone seems genuinely interested in the other fellow's welfare.

Many improvements have been and are still being made at Phenix No. 1.

The village homes are neat and the yards gay with flowers—proof of home-loving wives and mothers.

J. N. Jones is the genial overseer of day carding and spinning and has a fine group of live wires in both departments.

A. J. Cody, Fred K. Owen and T. J. Ellison are section men in spinning; Colie Guyton is star baseball pitcher.

George Smith is second hand in carding; J. P. Miller, frame tender, and J. J. Farris, card grinder.

J. W. Riddle, overseer slashing, owns his own home near the mill village; C. C. Wilson, in card room, is an inventive genius, and has realized quite a neat sum from some of his inventions.

Fred Rollins is overseer weaving; J. D. Rippey, loom fixer; H. C. Wilson, overseer cloth room; W. E. Owens and B. G. Mauney, master mechanic; R. L. Wright, electrician.

On Second Shift

G. W. White is overseer carding; H. C. Tate, overseer spinning; Carl Hughes, overseer weaving; I. W. Ledford, mechanic; Elam Hamrick, smash hand; E. W. Putnam, section man in spinning; J. C. Hall, loom fixer.

The Office and Store

The office and store are connected and close to the mill.

E. A. Hamrick, of Shelby, is president; L. W. Hamrick, assistant treasurer, and everybody's good friend; Frank Cox, office man, and J. D. Smith, shipping clerk.

A young lady in the office, who a year ago very emphatically stated her opinion of "traveling salesmen," declaring she would not have one off a Christmas tree, actually let one of the tribe lead her to the "halter" recently—and now continues to "type" while he continues to travel!

F. B. Glass, Phenix store manager, has a full and complete line of groceries and dry goods, well displayed and reasonable in price. But no one is compelled to buy there.

Phenix No. 2

B. T. Bumgarner, formerly with Sanford Cotton Mill, Sanford, N. C., is very much on the job here and has everything going nicely.

He has so much confidence in his wife's good temper and excellent management that he takes company in for lunch without a word of warning, and there is no need for apologies or explanations. Such a nice lunch—good home grown vegetables and everything the heart could wish. All Mrs. Bumgarner had to do was to fix another place at the table, and "Aunt Becky" had a real honest-to-goodness perfectly cooked meal.

Mr. Bumgarner is an authority on bees and could easily have written "Keeper of the Bees." He can raise queen bees from any egg in the hive by covering it with "royal food," a peculiar substance prepared by the bees for their queens. He says working bees only live 60 days! They work themselves to death!

Phenix No. 2 is the old Dilling Mill, formerly a fancy weave mill. Yarns only are now made, and of such excellent quality that sales are ahead of output.

Mr. Bumgarner is a stickler for sobriety, and if an operative takes on too much "fire water" and disgraces himself and the community by any "wild doings," he automatically discharges himself and there is no second chance.

Mack Connor, overseer twisting, is an old friend of the writer, so is Mrs. Mack, an ardent lover of flowers; her hobby is dahlias, and she's a prize winner at fairs.

G. R. Laney is oiler and bander; H. C. Allman and Jethro Ham, section men; Ervin Connor, yarn baler; W. T. Worrell, overseer day carding; Robert Hensley, night carder; C. Y. White, second hand in carding; Frank Green, night spinner; Kelley Goforth, night twister; L. L. Smith, oiler.

I tried to get a picture over at No. 1, but Superintendent White could not be still and the thing was "N. G.!"

Neisler Mills

The Neisler Mills have an enviable reputation for producing high-grade Jacquard weaves—bedspreads and upholstery being leaders. They also make blankets, tablecloths, napkins and other lines.

A large, handsome and comfortable motor bus, taking operatives to and from work, is furnished by the Neisler Mills.

The Neisler brothers are among the most progressive and generous textile magnates in the State and are held in high esteem by all who know them.

C. E. Neisler, Jr., is president; J. A. Neisler, secretary; P. M. Neisler, treasurer; Frank Roberts is superintendent of weaving; J. C. Jolly, superintendent of carding and spinning.

Have lost my notes concerning these mills but I haven't forgotten the courtesies extended me by Mr. Neisler and all his overseers.

Phenix Club Members in Washington, D. C.

CAMDEN, S. C.

Hermitage Mill

This mill is making many improvements. An addition has been made for cloth storage, mixing room and supply room. One hundred X Model looms are taking place of old ones. New hardwood floors have been put in.

J. F. Jordan, overseer carding and spinning, trains his own men and has a fine crew. C. H. Hayes and J. C. Eddings are second hands in the speeder department; L. C. Vinson and W. A. Case, card grinders; C. C. Crolley is second hand in spooling and warping, first shift, and W. C. Brewer on second shift; L. F. Baker is second hand in spinning; Joe Rhodes is machinist.

Superintendent S. L. Crolley has two fine boy children, who can twist him around their chubby fingers most any old way.

Was sorry to miss seeing President and Treasurer R. B. Pitts, who was out of town. Also missed seeing Manager A. Stanley Llewellyn at the Kendall Mill—Wateree Plant.

GREENVILLE, S. C.—At the Florence Mills, American Spinning Division, local unit, where a complete modernization program has been under way at a cost of approximately $250,000, much important machinery has been rearranged and many other changes made. This modernization program was under the direction of J. E. Sirrine & Co., textile and industrial architects and industrial engineers of this city. Included in the building changes were the removal of several brick crosswalls, the replacement of old wood sash with steel windows, the installation of a new roof, a new lighting system, the installation of two high-speed General Elevator Company's self-leveling elevators and new cooling and ventilating system for the slasher division. The opener room, picker division and carding division were reorganized, using mostly the former equipment. The drawing machinery was replaced with new Whitin drawing frames. New Whitin long-draft spinning was installed, also new Barber-Colman Company's automatic spooler and superspeed warper. This company is engaged in the manufacture of print cloths and broadcloths, using 44,435 spindles and a battery of 1,381 looms.

Southern Sources of Supply

For Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

ABBOTT MACHINE CO., Wilton, N. H. Sou. Agt., L. S. Ligon, Greenville, S. C.

ACME STEEL CO., THE, 2840 Archer Ave., Chicago, Ill. Sou. Sales Offices: Georgia—Atlanta, Acme Steel Co. of Ga., Inc., 603 Stewart Ave.; F. H. Webb, Mgr., 1281 Oxford Rd., N.E.; W. H. Duane, 1196 Virginia Ave., N.E. North Carolina—Charlotte, F. G. German, 1617 Beverly Drive. South Carolina—Greenville, G. R. Easley, 107 Manly St. Tennessee—Signal Mountain, W. G. Polley, 802 James Blvd. Florida—Orlando, R. N. Sillars, 605 E. Gore Ave.

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Spun Rayon

(*Continued from Page 3*)

is the fact that acetate staple rayon travels toward the middle of the yarn during the spinning process. This traveling of the acetate staple can be controlled, however, even reversed by proper selection of the acetate. When short and low denier acetate is used it travels to the inside of the yarn. If evenly mixed yarn is desired the acetate should be of the same denier as the wool. When employing higher denier acetate of shorter staple lengths, it will travel to the outside of the yarn so that some of the acetate ends will stick out of the yarn giving it a novel effect. Some difficulties have been encountered in the spinning of the acetate staple, however. The fibers in the spinning process become charged with static electricity and this, with the centrifugal effect of spinning draws the fibers away from each other. This makes the use of acetate uneconomical for ordinary purposes, but this drawback has been overcome to a certain extent and it is to be expected that it will be overcome entirely. This refers only to the spinning of acetate alone. This difficulty is much reduced when it is used with other fibers. Practical application has proven acetate staple to possess great potentialities, especially in Germany, where it is being used to great advantage in uniform cloth, men's suitings and other fabrics. So far, in mixtures of wool, 20 per cent acetate and 80 per cent wool has been proven to be the most advantageous one."

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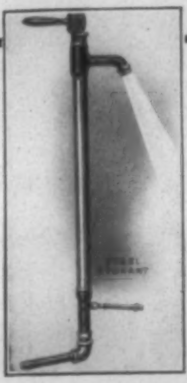

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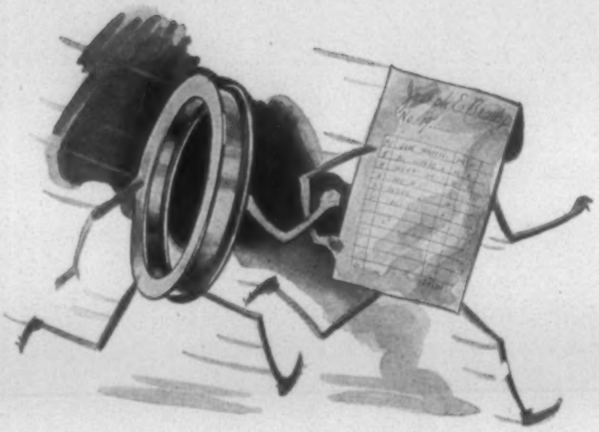

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